and dysuria in girls. Most venereologists would advise an intracervical swab for this purpose, since the cervix and not the vagina is the seat of the infection. A urethral culture and rectal culture for *Neisseria gonorrhoeae* should also be taken.

Professor Asscher does not mention chlamydial or trichomonal causes of dysuria and frequency. In a venereal disease clinic these pathogens are more common than the gonococcus as a cause of dysuria.

PAMELA WRAY

Ipswich Hospital,
Ipswich, Suffolk

SIR,—Professor A W Asscher's helpful account (10 June, p 1531) of the management of frequency and dysuria is welcome. May we, however, recommend a minor but important modification to his advice for diagnosing gonorrhoea as one of the causes? A cervical swab in transport medium would be preferable to a high vaginal swab; indeed, some special clinics no longer routinely examine vaginal swabs for gonococci. The following data support our case. The results of cultures from four sites in 368 women from whom gonococci were grown from one or more sites were as follows:

Site	Positive	Only site positive
Urethra	70 ⁰ / ₁₀₀	3 ⁰ / ₁₀₀
Cervix	87 ⁰ / ₁₀₀	9 ⁰ / ₁₀₀
Vagina	71 ⁰ / ₁₀₀	4 ⁰ / ₁₀₀
Rectum	36 ⁰ / ₁₀₀	3 ⁰ / ₁₀₀

The data show clearly that the cervix was the most productive site. Although quite a high proportion of vaginal swabs were also positive, this success is likely to have been due to the use of a selective medium preventing overgrowth of contaminants and also because the swabs were collected under direct vision.

C A MORRIS

Public Health Laboratory,
Shrewsbury, Salop

A E WILKINSON

Venereal Diseases Reference
Laboratory,
London E1

Comparison of the tine and Mantoux tuberculin tests

SIR,—The results of the comparison carried out by the Tuberculosis Subcommittee of the British Thoracic Association (3 June, p 1451) confirm the view that I have held for the past 10 years or more. I distinctly remember that the tine test on a man who later proved to have active tuberculosis was barely positive. Also from time to time I have Mantoux-tested young people whose tine tests have proved doubtfully positive and found that the Mantoux test gave an area of induration of 2 cm or more.

I think it is sad that the Schools Medical Service has gone over to the wholesale use of the tine test because of the ease of its administration since much scientific accuracy has been lost thereby. I myself as clinical medical officer have always insisted on doing the Mantoux test and I have to a large extent avoided the nasty, complicated, accelerated, and indurated reactions to the following BCG. These complicated reactions do cause

much stress to the individual boy or girl as well as to the child's family.

I feel that the routine use of the Mantoux test before BCG vaccination at the age of 11-13 could be more extensively used as a method of epidemiological surveillance of the child population at those ages. Case findings among the families of those children who have positive Mantoux tests would be rewarded more often with positive results.

I would therefore, from personal experience, advocate the return to routine Mantoux testing before BCG. We discussed this matter at a clinical medical officers' meeting in the Blackburn Health District on 6 June and it was the unanimous recommendation of all the medical officers present that we should return to using the Mantoux test as a routine. However, such a return to routine Mantoux testing may be difficult to accomplish on a national scale because of a shortage of recruits to the clinical medical officer grade. We ourselves in this district still experience such difficulties because we are currently advertising for two more clinical medical officers.

J HOUGHTON

Clitheroe, Lancs

SIR,—We find the report of the Tuberculin Subcommittee of the Research Committee of the British Thoracic Association (3 June, p 1451) surprising and the conclusions difficult to accept.

In our opinion the tuberculin tine test, when carefully performed, provides a simple and reliable screening test. Indeed, as the authors themselves point out, there are other reports which conflict with theirs. One of the authors draws attention to an increased number of accelerated and severe local reactions which he finds among tine-negative subjects given BCG. In our hands accelerated reactions in non-reactors to the tine test are excessively rare. The reasons for these conflicting findings require investigation. Meanwhile we see no reason why those experienced in the use of the tine test should not continue to use it.

MAXWELL CAPLIN

L H CAPEL

RONALD RIDDELL

London Chest Hospital,
London E2

STANLEY STEEL

London Chest Hospital and
Romford Chest Clinic,
Romford, Essex

O R MCCARTHY

West Ham Chest Clinic,
London E13

Vision screening in children

SIR,—The title of the report by Mr A D Tibbenham and his two medical colleagues (20 May, p 1312) should have been "Screening of visual acuity." They have equated normal vision with the visual acuity (VA) of each eye. Normal vision involves much more. It is astonishing that there is no mention of binocular vision in an article entitled "Vision screening in children." This is going back to the bad old days before people realised the need of early diagnosis of defective binocular vision and the early treatment of squint. A child with an alternating squint may have VA 6/6 (or even 6/5) in each eye and, according to the authors, come in the category

of "normal vision." This is dangerous. Further, no mention is made of manifest hypermetropia. At an age (say 9) when the patient has 14 D of accommodation an effort of focus may disguise in distant vision much hypermetropia and such a child may be said to have normal VA; but it may lead to rebellious behaviour when the child is made to read or write.

We have to remember that normal vision has six essential attributes: (1) effortless normal VA for distance in each eye; (2) easy binocular vision with sustained convergence for near objects; (3) accommodation normal for age; (4) full visual fields; (5) good perception of colours; and (6) normal mental interpretation. It would be wise for the boys at either the 11- or 16-year screening to have their colour perception tested.

The eyes grow in length from about 16.5 mm at birth to about 24 mm at puberty, and the density of the lenses alters throughout life. VA depends on the combined correlation between curvature, refractive index, and length, so it is not at all surprising that variations in VA occur during childhood. The amazing thing is that this combination so often results in normal or near-normal visual acuity; but that is not the same as normal vision, which includes binocular vision developed during childhood.

THEODORE H WHITTINGTON

Sutton, Surrey

*.*We sent a copy of this letter to Mr Tibbenham and his colleagues. A reply from Dr Gardiner is printed below.—Ed, *BMJ*.

SIR,—On behalf of my colleagues I would like to accept Dr Whittington's suggestion of a more accurate title. Of course we agree that we were not talking about the totality of normal vision which he describes so clearly.

May we add one improvement to his list—that is, that colour vision screening in boys is well worth doing at school entry? An undiscovered defect at that time may produce distress in their first months at school such as he describes for hypermetropes learning to read and write.

P A GARDINER

Guy's Hospital,
London SE1

Preventing fat embolism

SIR,—I have read with great interest your leading article on this subject (13 May, p 1232). We have found a strong positive correlation between high serum free fatty acid (FFA) concentrations and low arterial oxygen tensions up to 24 h after injury in uncomplicated patients following major long-bone fracture.¹ The reason for this relationship could be more than a casual one. The patient mobilises his FFAs as an emergency source of nutrient. The more severely injured the patient, the higher his energy requirements. This was demonstrated by the elevated FFA levels in our study. Furthermore, arterial oxygen tension was significantly reduced in these patients 12 and 24 h after injury.

Unbound FFAs, particularly oleic acid, are potent cytotoxic agents. Peltier² showed that death in experimental animals following infusion of FFA was due to disruption of pulmonary capillary endothelium. The increase in the serum FFA concentration is caused by an adrenergic response.³ Since individuals